

ENTOMOLOGY.—*New species of chrysomelid beetles of the genera Trirhabda and Disonycha.* DORIS H. BLAKE, Arlington, Va.

The following new species of *Trirhabda* and *Disonycha* form an addition to my revisions of those genera in 1931¹ and 1933,² respectively. The specimens from which they were described, with one exception, had been set aside from the regular collection by H. S. Barber as new and came to light only after his death.

***Trirhabda geminata* Horn**

Figs. 2, 4, 6, 9

Trirhabda geminata Horn, Trans. Amer. Ent. Soc. **29**: 68. 1893.

Trirhabda nigrohumeralis Schaeffer, Bull. Brooklyn Inst. Arts and Sci., **1**: 170. 1905.

In my revision of the genus *Trirhabda* I stated that the "pale forms of *geminata* are sometimes difficult to distinguish from *nigrohumeralis*" but "in general *nigrohumeralis* is smaller . . . and the aedeagus quite unlike that of *geminata*, being small, tapering and rounded at the tip." At that time I did not have specimens of Schaeffer's types of *nigrohumeralis* and did not realize that the aedeagus that I was describing was from a specimen outwardly like *nigrohumeralis* but quite unlike that species in its genitalia. From labels in the collection I have found that H. S. Barber, on acquiring Schaeffer's collection and dissecting a male of that species, at once saw that what I described was really a new species. However, he does not appear to have suspected that *nigrohumeralis* itself is simply a color form of *geminata*. I am forced to this conclusion after examining specimens from many localities in California, Arizona, New Mexico, and even Texas. Horn gave as type localities "San Diego, California and Arizona." Specimens from near the coast are darker in their markings than many inland specimens, although some from Nogales and Tucson, Ariz., are fully as dark. Others from those localities are of the coloring that Schaeffer described for *nigrohumeralis* with "unicolorous pale elytra" having "an elongate narrow black humeral spot." Dissection of these specimens reveals an aedeagus like that of *geminata*. A still paler and smaller series of specimens from near Presidio, Tex., taken on *Brickellia* shows a similar

aedeagus. It appears that this species as it occurs eastward across the country grows smaller and paler in coloring. Specimens were taken by Hubbard and Schwarz at St. Rita and Nogales on *Brickellia*, and also in 1945 by an unknown collector on this food plant at Nogales. Other specimens at Nogales were taken on lettuce (collector unknown). At Cataline Springs, northeast of Tucson, they were taken by Hubbard and Schwarz on *Encelia*, and on guayule, near Tucson, by an unknown collector. The localities for *T. geminata* (including the paler forms) in the U.S. National Museum are: *California*: Claremont, Baker Coll.; *Arizona*: Bright Angel, Camp Verde, H. Brisley; Cataline Springs, Hubbard and Schwarz; Huachuca Mountains, Schaeffer Coll.; Nogales, Oracle, Hubbard and Schwarz; Palmerly, Cochise County, Schaeffer Coll.; Sta. Rita Mountains, Hubbard and Schwarz; *New Mexico*: Jemez Mountains, John Woodgate; Las Vegas, Barber and Schwarz; *Texas*: Near Presidio, collector unknown.

***Trirhabda schwarzi*, n. sp.**

Fig. 7

Trirhabda nigrohumeralis Blake (not Schaeffer, 1906), Proc. U. S. Nat. Mus. **79** (art. 2): 30, 31. 1931.

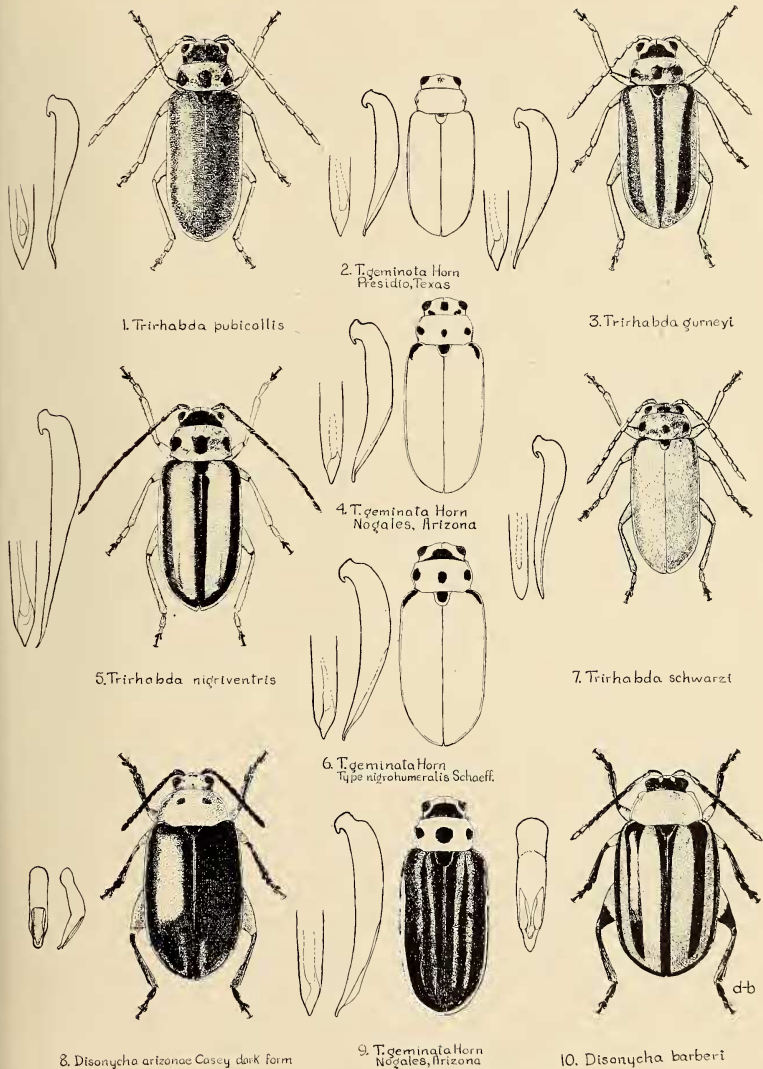
Between 4.5 and 7.5 mm in length, elongate oblong, pale yellow-brown, finely pubescent, the head with an oblong dark spot, mouthparts pale; three dark pronotal spots; scutellum bicolored, the elytra with a dark humeral streak, body beneath entirely pale, antennae usually pale, claw joint sometimes a little darker.

Head with a dark oblong spot down the occiput, mouthparts pale, densely and obsoletely punctate down to tubercles with a depressed median line, from tubercles down shiny and impunctate. Antennae usually pale brownish, not at all piceous. Prothorax about twice as wide as long, depressed on each side, alutaceous, with coarse punctures, pale brown with three small spots. Scutellum partly dark. Elytra pale brown with a darker humeral streak fading out down the side. Body beneath entirely pale, legs pale, except sometimes the claw joint a little darker. Length 4.6-7.4 mm; width 2-3 mm.

Type male and 41 paratypes, U.S.N.M. no. 61126. 2 paratypes in M.C.Z., collected at Ash-

¹ Proc. U. S. Nat. Mus. **79** (art. 2): 1-36. 1931.

² Proc. U. S. Nat. Mus. **82** (art. 28): 1-66. 1933.



Figs. 1-10.—Species of *Trirhabda* and *Disonycha*

fork, Ariz., by H. S. Barber and E. A. Schwarz on June 17, 1901.

Other locality.—Prescott, Ariz., collected by Barber and Schwarz on June 19, 1901.

Remarks.—This species is outwardly well-nigh indistinguishable from the pale forms of *T. geminata* Horn (*nigrohumeralis* Schaeffer) and was the species figured and erroneously believed to be *nigrohumeralis* in my revision of the genus in 1931. The aedeagus is not at all like that of *geminata*, and there are a few minor color differences that appear to be constant—the antennae and mouthparts are pale, not piceous, and the claw joint alone is dark, whereas in *geminata*, except in palest forms, the last two tarsal joints are usually dark.

Trirhabda pubicollis, n. sp.

Fig. 1

About 7 mm in length, elongate oblong, densely and somewhat rugosely punctate, head, pronotum, and elytra with fine short pubescence; pale yellow-brown, the head with a deep metallic-green band extending from occiput to tubercles except for a narrow pale area about eyes; pronotum with three large irregularly shaped piceous spots, elytra metallic dark green except for a narrow yellow border, body beneath, legs and antennae pale, claw joint deeper brown.

Head densely and rather shallowly punctate over occiput and upper front with a median impressed line, finely pubescent, area above tubercles except for a narrow area about eyes entirely dark metallic green, labrum piceous edged. Antennae pale reddish brown except for a deeper brown basal joint, unusually long and slender, fourth joint about twice as long as third. Prothorax about twice as wide as long with nearly straight sides (viewed from above); depressed across the middle, especially on the sides, and coarsely punctate, surface shining, not at all alutaceous and with moderately dense pale pubescence, pale with three large, irregularly shaped piceous spots. Scutellum dark. Elytra deep metallic green with a pale yellow brown border, densely and moderately coarsely punctate and covered with fine pale pubescence. Body beneath and legs pale, the claw joints alone deeper brown. Length 7 mm; width 2.4 mm.

Type male U.S.N.M. no. 61127, collected at El Paso, Tex., May 2, collector unknown.

Remarks.—Only a single specimen is at hand,

but this one is distinctly unlike any other described from north of Mexico. It may well be a Mexican species but apparently is not described. The prothorax is unusual in being conspicuously pubescent and short. The aedeagus too is distinctive with its long tapering tip.

Trirhabda gurneyi, n. sp.

Fig. 3

Between 6 and 7.5 mm in length, elongate oblong, faintly shining, especially on the prothorax, with finely pubescent elytra, pale yellow-brown, the head with a wide, dark, occipital band curving down front, prothorax with the usual three dark spots, scutellum dark, elytra with piceous sutural and lateral vittae, not united at the apex, body beneath, antennae and legs pale.

Head coarsely punctate over occiput and down to frontal tubercles, with a median impressed line, pale with a dark band across occiput, curving down the front, mouthparts usually dark. Antennae as a rule pale, never deep piceous. Prothorax not quite twice as broad as long, with slightly angulate sides, depressed on either side, shining, not at all alutaceous, and more or less coarsely punctate, pale with three medium sized black spots, the middle one often shield shaped. Scutellum usually entirely dark, in 2 of the 14 specimens somewhat paler toward apex. Elytra densely and moderately coarsely punctate, the punctures not confluent, and with short fine pubescence; pale yellow brown with a narrow sutural and not very wide lateral vitta, these not uniting at apex, the sutural one becoming narrow at apex so as to darken only the sutural edges, in one specimen the lateral vitta fading out from the middle to apex. Body beneath and legs pale, the claws somewhat deeper in coloring. Length 6-7.5 mm; width 2.6-3 mm.

Type male and 11 paratypes, U.S.N.M. no. 61128. Two paratypes in M.C.Z., collected by A. B. Gurney at Indian Springs, Nev., June 5, 1949, on *Franseria*.

Remarks.—In coloring this species resembles somewhat *T. adela* Blake, except that it is always pale beneath and smaller with less densely pubescent elytra. It has also a shiny, not alutaceous prothorax. It differs from *T. nitidicollis* in not having the vittae joined at the apex and in the differently shaped prothorax.

Trirhabda nigriventris, n. sp.

Fig. 5

Between 6 and 9.5 mm in length, elongate oblong, finely punctate, with short, fine pubescence, head with a broad black plaga curving down over front, thorax shiny, 3-spotted, elytra with narrow sutural and lateral vittae almost always uniting at apex, frequently the lateral vitta having a paler trace of vitta as an offshoot near the apex, breast and abdomen dark.

Head with a median impressed line, densely and not very coarsely punctate over front, a broad dark occipital band curving down front, mouthparts with dark edging. Antennae long and slender, the basal joints with pale edging, distal joints entirely dark. Prothorax not quite twice as broad as long with slightly arcuate sides, depressed across, especially on the sides, shiny, more or less coarsely punctate, with three black spots, the middle one tending to be shield shaped. Scutellum usually entirely dark. Elytra densely but not very coarsely punctate, with short fine pubescence, sutural dark vitta nearly always uniting at apex with lateral vitta, the lateral vitta frequently having at apex a decurrent paler brown vitta running up, sometimes to the middle of the elytra. Body beneath with breast and abdomen, except at the tip, dark, legs pale, except the darker claw joint. Length 6-9.5 mm; width 2.6-3.5 mm.

Type male and 90 paratypes, U.S.N.M. no. 61129. Four paratypes in M.C.Z.; 5 paratypes in British Museum, taken on sagebrush, *Artemisia tridentata*, August 1, 1938, by O. V. Smith at Aztek, N. Mex.

Remarks.—The dark ventral surface and shiny prothorax distinguish this species from *T. lewisii* Crotch. It is one of the few larger western species with a dark undersurface.

Disonycha barberi, n. sp.

Fig. 10

From 5.4 to 6.6 mm in length, oblong oval, shining, pale yellow, the head with a broad dark occipital band extending in a point down the front and about the eyes and sides, the elytra with a sutural and marginal dark vitta uniting at apex and a median vitta, legs dark at apex of femora and the tibiae and tarsi entirely dark, beneath with the breast dark. Eyes unusually large, antennae dark with the tip paler.

Head shining, the polished dark occipital band finely punctate on the occiput and front and extending in a peak down to tubercles, also about the eyes and down the side of the head, the mouthparts dark; eyes unusually large, the interocular space being less than half the width of the head, a fovea on each side near eye composed of punctures; tubercles pale and well marked, carina between antennal sockets not very wide or produced but rounded. Antennae dark with the three basal and 2 apical joints more or less pale. Prothorax about twice as wide as long at base with rounded sides, somewhat depressed over the scutellum, entirely pale with very faintly punctate surface, shining. Scutellum dark, triangular. Elytra shining, more distinctly punctate, pale with a moderately wide sutural and marginal vitta joined at apex, median vitta moderately wide, epipleura wide and dark but diminishing and vanishing before the apex. Body beneath with the breast more or less darkened, the apices of the anterior pairs of femora narrowly and those of the posterior femora more widely dark, the tibiae and tarsi dark. Length 5.4-6.6 mm; width 3-3.3 mm.

Type male and 20 paratypes, U.S.N.M. no. 61130. Two paratypes in M.C.Z., 1 paratype in British Museum, collected at Brownsville, Tex., four specimens on September 16, 1939, on *Condalia obovata* and the rest in June 1945 and September 1944 by J. D. Smith, who reared them from *Phaulothamnus spinescens*.

Other localities.—San Bonito, Tex., on corn foliage, March 27, 1945; Sebastian, Tex., April 24, 1945; 1 specimen trapped at airport, Brownsville, June 6; 1 specimen taken from the cabin of a plane "in Mexico," June 26, 1947.

Remarks.—This species had been labeled by Mr. Barber with two different new specific names, the first one from its resemblance to *D. glabrata* (Fabricius), the second from its food plant. Both names are somewhat awkward-sounding, and so I propose to name it after Mr. Barber whose glee on discovering it I well remember. In general markings it resembles closely *D. glabrata*, but the unusually large eyes and different pattern of the head markings at once distinguish it. None of the specimens has any pronotal dark spots such as are usual in *D. glabrata*. Both larvae and eggs were sent in by J. D. Smith, who reared it from *Phaulothamnus spinescens*.

Disonycha arizonae Casey

Fig. 8

Some years ago Dr. E. C. Van Dyke sent me four specimens (three females and one male) of a *Disonycha* from the collection of the California Academy of Sciences, with the label Elmwood, Tenn., Fenyas Coll. At first sight it seemed to be something new, but the label reminded me of a series in the U. S. National Museum with the

same locality label that were typical specimens of *D. arizonae* Casey, and on comparison I found these four to be simply a dark color form of that species. This was corroborated by examination of the male genitalia. In all four specimens the elytra were deep reddish brown or piceous with a narrow pale margin, and in all four there was a faint trace of vittation at the apex, in the darkest specimen, only a tiny pale spot but in the others, showing very faintly, two pale vittae.

ZOOLOGY.—*Geographical distribution of the nemerteans of the northern coast of the Gulf of Mexico as compared with those of the southern coast of Florida, with descriptions of three new species.* WESLEY R. COE, Scripps Institution of Oceanography.¹ (Communicated by W. L. Schmitt.)

Up to the present time no published information has been available relative to the nemerteans of the areas covered by this report. Consequently it has been uncertain whether the nemertean fauna might be found to consist principally or wholly of species identical with those of the Atlantic coast or whether the more typically tropical or subtropical species would be included. Nor was it known whether any or many apparently endemic forms might be present.

Twenty-two species have now been identified. Sixteen of these are found on the northern coasts of the Gulf and six others in southern Florida. Only two specimens from the deeper, off-shore waters of the Gulf have been obtained by the writer. Both of these belong to either *Lincus* or *Micrura*, but the specimens were not sufficiently well preserved to allow specific analysis. No information is yet available for all that portion of the western Gulf coast south of the Mexican border, or for any locality on the west coast of the Florida peninsula between Franklin County and Key West.

The presumable explanation for the small number of species at present known is that only sporadic efforts have been made toward a complete survey of the littoral fauna of the Gulf. On the Atlantic coast of North America there are 53 known species of nemerteans and on the Pacific coast 95 species. Hence it seems probable that there are many more

species now actually living in the Gulf than can be included in this report.

Even on the Atlantic coast the nemerteans have been studied extensively only as far south as New Jersey, and our knowledge of the species living between that State and Florida is based on collections made at widely separated localities. It may therefore be assumed that some, perhaps many, additional species remain to be discovered there.

All except two of the species known from the northern part of the Gulf are also found on the Atlantic coast. Therefore, it seems probable that the nemertean fauna of the northern Gulf coast has in the past been a continuation of that of the Atlantic coast and that it is now a separate fauna that was isolated in Pleistocene times by the Florida Peninsula. To determine whether any of the populations of the two areas are at present continuous, it is essential to obtain additional collections on both sides of the southern half of that peninsula. It is already known that the species found at Pensacola, on the Gulf side, are similar to those found by the writer personally at St. Augustine, on the Atlantic side. The following lists, however, indicate that these two nemertean faunas are separated by an area in which other species predominate.

Because the nemerteans of the northern Gulf coast are generally of different species than those at present known from southern Florida, the species of the two areas will be listed separately.

¹ Contribution from the Scripps Institution of Oceanography, new series, no. 539.